

IN THE SPECIFICATION

The following paragraphs will replace all prior versions of themselves in the specification of the application.

- 1) In paragraph [0028], please make the following amendments:

[0028]

[Table 1]

Sample No.	CBN Content	Catalyst Element Content		
	(volume %)	Li (weight %)	Mg (weight %)	Others (weight %)
1*	65*	0.021	0.007	
2	75	0.022	0.006	
3	85	0.021	0.007	
4	90	0.020	0.007	
5	95	0.019	0.008	
6*	99*	0.020	0.007	
7*	90	*	0.007	
8	90	0.006	0.007	
9	90	0.013	0.008	
10	90	0.041	0.007	
11*	90	0.062*	0.006	
12	90	0.020	0.002	
13	90	0.020	0.015	
14*	90	0.022	0.040*	
15	90	0.021	0.007	Ca; 0.05
16	90	0.020	0.007	Ca; 0.1
17	90	0.021	0.008	Ca; 0.4
18	90	0.021	0.007	Sr; 0.05
19	90	0.020	0.007	Ba; 0.03
20	90	0.020	0.007	Ca; 0.1, Sr; 0.08
21	90	0.019	0.007	Ca; 0.1, Be; 0.05
22	90	0.021	0.007	Ca; 0.2, Sr; 0.2
23	90	0.021	0.007	Ca; 0.06, Si; 0.12
24	90	0.020	0.07 0.007	Ca; 0.07, Si; 0.40
25	90	0.020	0.08 0.008	Ca; 0.07, Si; 0.61
26	90	0.020	0.08 0.008	Ca; 0.09, Sr; 0.07, Si; 0.10
27	90	0.020	0.07 0.007	Ca; 0.06, Ga; 0.10
28	90	0.021	0.06 0.006	Ca; 0.07, La; 0.09

*: derived from Comparative Example

2) In paragraph [0035], please make the following amendment:

[0035]

Based upon comparisons between sample 4 and samples 15 to 22, it is found that, in comparison with sample 4 containing none of Ca, Sr, Ba and Be in cBN particles, samples 15, 16, 18 to 21, which contain 0.001 wt% or more to 0.3 wt% or less in total of at least one kind of elements, Ca, Sr, Ba and Be in cBN particles, are superior in wear resistance. Moreover, based upon samples 17 and 22, it is found that excessive amounts of ~~Ca, Sr, Ba and Be~~ Ca and Sr fail to provide an effect for improving the wear resistance.

3) In paragraph [0036], please make the following amendment:

[0036]

Based upon comparisons between sample 4 and samples 23 to 28, it is found that, in comparison with sample 4 containing none of Si, Ga and La in cBN particles, samples 23, 24 and 26 to 28, which contain 0.001 wt% or more to 0.5 wt% or less in total of at least one kind of elements, Si, Ga and La in cBN particles, are superior in wear resistance. Moreover, based upon sample 25, it is found that ~~excessive amounts of Ca, Sr, Ba and Be fail~~ an excessive amount of Si fails to provide an effect for improving the wear resistance.

4) In paragraph [0041], please make the following amendment:

[0041]

Based upon comparisons between sample 4 and samples 15 to 22, it is found that, in comparison with sample 4 containing none of Ca, Sr, Ba and Be in cBN particles, samples 15, 16, 18 to 21, which contain 0.001 wt% or more to 0.3 wt% or less in total of at least one kind of elements, Ca, Sr, Ba and Be, have a smaller number of heat checks and become superior in heat resistance. Moreover, based upon samples 17 and 22, it is found that excessive amounts of ~~Ca, Sr, Ba and Be~~ Ca and Sr fail to provide an effect for improving the heat resistance.

5) In paragraph [0042], please make the following amendment:

[0042]

Based upon comparisons between sample 4 and samples 23 to 28, it is found that, in comparison with sample 4 containing none of Si, Ga, and La in cBN particles, samples 23, 24 and 26 to 28, which contain 0.001 wt% or more to 0.5 wt% or less in total of at least one kind of elements, Si, Ga and La, are less

susceptible to heat checks, and superior in heat resistance. Moreover, based upon samples 25, it is found that ~~excessive amounts of Ca, Sr, Ba and Be fail~~ an excessive amount of Si fails to provide an effect for improving the heat resistance.

6) In paragraph [0047], please make the following amendment:

[0047]

Based upon comparisons between sample 4 and samples 15 to 22, it is found that, in comparison with sample 4 containing none of Ca, Sr, Ba and Be in cBN particles, samples 15, 16, 18 to 21, which contain 0.001 wt% or more to 0.3 wt% or less in total of at least one kind of elements, Ca, Sr, Ba and Be, have a longer time span up to chipping, and are superior in chipping resistance. Moreover, based upon samples 17 and 22, it is found that ~~excessive amounts of Ca, Sr, Ba and Be~~ Ca and Sr fail to provide an effect for improving the chipping resistance.

7) In paragraph [0048], please make the following amendment:

[0048]

Based upon comparisons between sample 4 and samples 23 to 28, it is found that, in comparison with sample 4 containing none of Si, Ga and La in cBN particles, samples 23, 24 and 26 to 28, which contain 0.001 wt% or more to 0.5 wt% or less in total of at least one kind of elements, Si, Ga and La, are superior in chipping resistance. Moreover, based upon samples 25, it is found that ~~excessive amounts of Ca, Sr, Ba and Be fail~~ an excessive amount of Si fails to provide an effect for improving the chipping resistance.

8) In paragraph [0052], please make the following amendment:

[0052]

[Table 3]

Sample No.	cBN Content (volume %)	Content after Hydrofluoric Acid Treatment on Sintered Body		Amount of Flank Wear (mm)
		Li (weight %)	Mg (weight %)	
29	88	0.020	0.007	0.185
30	88		0.070	0.336
31	88	0.066	0.080	0.295
32	88	0.021	0.050	0.302
33	88	0.021	0.030	0.200
34	88	0.05	0.07 0.007	0.190
35	88	0.05	0.03	0.220
36	88	0.06	0.03	0.270
37	88	0.05	0.04	0.270

9) In paragraph [0054], please make the following amendments:

[0054]

The results of comparisons on samples 29 to 37 show that in comparison with ~~sample 29~~ samples 29, 33, 34, and 35 formed based upon the scope of the present invention, sample 30 from which no Li had been detected was inferior in wear resistance. This is presumably because, since the mutual reaction between cBN particles due to the catalyst effect only by additive bonding materials causes remaining unreacted portions and reaction defective portions, coming off of particles occurs from these portions upon cutting to cause an increase in the amount of wear. Moreover, ~~samples 31 and 32~~ 31, 32, 36, and 37, which have greater amounts of Li and Mg than the scope of the present invention, also cause degradation in the wear resistance. This is presumably because, since excessive Li and Mg in cBN particles cause defects, coming off of particles occur upon cutting, resulting in degradation in the wear resistance.

10) In paragraph [0056], please make the following amendment:

[0056]

~~Table 4 shows various cBN sintered bodies that were prepared by changing the kind of cBN powder and the ratio of the cBN powder and the bonding material powder. The content of the cBN powder and the amount of a catalyst element were measured by~~

using the following method: First, in order to measure the contents of elements in the cBN sintered body, after the sintered body had been dissolved by using a molten salt method, the respective elements were quantitatively measured by using an Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP method). Based upon the results of the measurements, the content of cBN particles in the cBN sintered body was calculated in volume %. Here, the calculation of the content was carried out on the assumption that Ti, V, Cr, Zr, Nb, Mo, Ta, Hf, Fe, Ni, Cu, Si and the like that were compositions other than cBN and WC were included as metals as they were.

11) In paragraph [0060], please make the following amendment:

[0060]

Comparisons on samples 38 ~~to 52~~ to 59 indicate that when 0.001 to 1.5 wt% of an additive bonding material is added to a sintered body in wt% in the sintered body, both of wear resistance and chipping resistance can be improved. This is presumably because by adding a slight amount of at least one or more elements selected from the group consisting of Ti, V, Cr, Zr, Nb, Mo, Ta, Hf, Fe, Ni, Cu and Si to a Co or Al-based metallic bonding material that has a function for forming a neck growth between mutual cBN particles, the function for forming the neck growth is accelerated. However, as shown by samples 45, 54 and 59, when the additive bonding material exceeding 1.5 wt% in the sintered body in wt% is added thereto, the cutting performance drops abruptly so that it is assumed that the excessive amount of addition inhibits formation of the neck growth, on the contrary.